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| 10/723,086 | 11/25/2003 | David William Trepass | 282532US8X | 7893 |
| 22850 7590 07/09/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | EXAMINER DAYE, CHELCIE L | |
| | | | ART UNIT 2161 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/723,086 | TREPESS ET AL. | |
| | Examiner | Art Unit | |
| | Chelcie Daye | 2161 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10,12,13,15,17-28 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10,12-13,15,17-28, and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is issued in response to applicant's RCE filed April 27, 2007.
2. Claims 1-10,12-13,15,17-28, and 33 are presented. No claims are added and claims 11,14,16,and 29-32 remain cancelled.
3. Claims 1-10,12-13,15,17-28, and 33 are pending.

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 27, 2007 has been entered.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1,19,23, and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably

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convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, newly amended claims 1,19,23, and 33, recite "another cluster within the hierarchical level which is not currently displayed within the display area", which is not supported within the specification and is deemed as new matter. Examiner is unable to determine how/why the applicant displays a first cluster within one of the hierarchical levels, but does not display another cluster within the same hierarchical level. Also, the claim further states, "display the indication of the relative direction of the other cluster within the display area of the graphical display"; which is contradictory of the newly added limitation because the stated limitation states the another/other cluster is displayed. There is a multitude of uncertainty within the claim language with which the description does not provide an understanding for.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

8. Claims 1,19,23, and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Newly amended independent claims 1,19,23, and 33 are rejected under 35 U.S.C. 112, second paragraph, for having negative limitations, which are not clearly pointed out within the description. Specifically, the claims recite the limitation another cluster within the hierarchical level which is not currently displayed within the display

area". The current view of the courts is that there is nothing inherently ambiguous or uncertain about a negative limitation. So long as the boundaries of the patent protection sought are set forth definitely, albeit negatively, the claim complies with the requirements of 35 U.S.C. 112, second paragraph. Some older cases were critical of negative limitations because they tended to define the invention in terms of what it was not, rather than pointing out the invention. Thus, the court observed that the limitation "R is an alkenyl radical other than 2-butenyl and 2,4-pentadienyl" was a negative limitation that rendered the claim indefinite because it was an attempt to claim the invention by excluding what the inventors did not invent rather than distinctly and particularly pointing out what they did invent. In re Schechter, 205 F.2d 185, 98 USPQ 144 (CCPA 1953). A claim which recited the limitation "said homopolymer being free from the proteins, soaps, resins, and sugars present in natural Hevea rubber" in order to exclude the characteristics of the prior art product, was considered definite because each recited limitation was definite. In re Wakefield, 422 F.2d 897, 899, 904, 164 USPQ 636, 638, 641 (CCPA 1970). In addition, the court found that the negative limitation "incapable of forming a dye with said oxidized developing agent" was definite because the boundaries of the patent protection sought were clear. In re Barr, 444 F.2d 588, 170 USPQ 330 (CCPA 1971). Any negative limitation or exclusionary proviso must have basis in the original disclosure. If alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. See In re Johnson, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977) ("[the] specification, having described the whole, necessarily described the part remaining."). See also Ex parte Grasselli, 231 USPQ 393

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(Bd. App. 1983), *aff'd mem.*, 738 F.2d 453 (Fed. Cir. 1984). The mere absence of a positive recitation is not basis for an exclusion. Any claim containing a negative limitation, which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Note that a lack of literal basis in the specification for a negative limitation may not be sufficient to establish a *prima facie* case for lack of descriptive support. *Ex parte Parks*, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter. 1993). See MPEP § 2163 - § 2163.07(b) for a discussion of the written description requirement of 35 U.S.C. 112, first paragraph. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention. A claim may be written in independent or, if the nature of the case admits, in dependent or multiple dependent form. Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 1-2,4-5,7-8,10,12-13,15,17-18,23,26-28, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saffer (US Patent No. 6,990,238) filed September 30, 1999, in view of "A Self-Organizing Semantic Map for Information Retrieval", By: Xia Lin, Dagobert Soergel, and Gary Marchionini, Published 1991; hereinafter referred to as 'Lin'.**

Regarding Claims 1,23, and 33, Saffer discloses an information retrieval apparatus comprising:

a mapping processor operable to receive data representative of a map of information items from a set of information items identified in a search (column 19, lines 4-38, Saffer), the map of information items providing the identified information items with respect to positions in an array in accordance with a mutual similarity of the information items, similar information items mapping to similar positions in the array (Fig.18; column 17, lines 36-57, Saffer), and to process the map data to form a hierarchical clustering of information items (columns 8-9, lines 53-67 and 1-4, respectively, Saffer) providing a first clustering

level of information items and at least one other clustering level of information items for clusters of information items within the first level clusters (column 10, lines 34-40, Saffer),

a display processor operable in combination with a graphical user interface (Fig.18, Saffer) to display a representation of at least some of the positions of the array correspond to identified information items as an n-dimensional display of display points within a display area of a graphical display (columns 18-19, lines 64-67 and 1-8, Saffer),

wherein the display processor is operable to generate data representative of an indication which when displayed on the graphical user interface provides a user, when viewing a first cluster in one of the hierarchical levels of a relative direction within the n-dimensional space of the location of another cluster within the hierarchical level which is not currently displayed within the display area (column 21, lines 55-67 and column 29, lines 21-33, Saffer), and the graphical user interface (Fig.16, Saffer) is operable to display the indication of the relative direction of the other cluster within the display area of the graphical display (column 29, lines 21-33, Saffer), and the data representing the number of information items within the cluster is displayable with respect to the indication (column 13, lines 5-14, Saffer). However, Saffer is silent with respect to the search using a self-organizing map. On the other hand, Lin discloses the search using a self-organizing map (pg. 262, "Abstract", Lin). Saffer and Lin are analogous art because they are from the same field of endeavor of information

retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Lin's teachings into the Saffer system. A skilled artisan would have been motivated to combine as suggested by Lin at pg. 267, 2nd paragraph, in order to conceptualize an information retrieval approach which uses traditional search techniques and the map as a browsing aid to support ordering, linking, and browsing information gathered by the filters.

Regarding Claim 2, the combination of Saffer in view of Lin, disclose an apparatus wherein the information items include a plurality of characterizing information features, the characterizing information features of each information item being used to form a feature vector for each information item (columns 9-10, lines 62-67 and 1-15, respectively, Saffer), the feature vector being used to form the map data by mapping the information item onto a position within the array (column 19, lines 31-38, Saffer).

Regarding Claim 4, the combination of Saffer in view of Lin, disclose an apparatus wherein the characterizing information feature associated with each first level cluster and the other characterizing information feature associated with each cluster within the other clustering level of information items are formed from a most common characterizing information feature present in the information items associated with each cluster (column 12, lines 60-67, Saffer).

Regarding Claim 5, the combination of Saffer in view of Lin, disclose an apparatus wherein the clusters of information items within one of the lower level clusters are associated with one another, whereas the other clusters of the first level are additional clusters of information items with respect to the information items within the lower level cluster (column 2, lines 23-39, Saffer).

Regarding Claim 7, the combination of Saffer in view of Lin, disclose an apparatus wherein the information items comprise textual information, the characterizing information features being words (columns 15-16, lines 60-67 and 1-2, respectively, Saffer), and the feature vector for an information item is representative of a set of frequencies of occurrence, within that information item, of each of a group of words (column 11, lines 23-51, Saffer).

Regarding Claim 8, the combination of Saffer in view of Lin, disclose an apparatus wherein the information items include textual information, the characterizing information features being words (columns 15-16, lines 60-67 and 1-2, respectively, Saffer), the positions within the array being mapped by mutual similarity of at least a part of the textual information (column 17, lines 36-57, Saffer).

Regarding Claim 10, the combination of Saffer in view of Lin, disclose an apparatus wherein the information items are pre-processed for mapping

(columns 10-11, lines 64-67 and 1-2, respectively, Saffer) by excluding words occurring within the textual information having less than a threshold frequency amongst the set of information items (column 30, lines 24-32, Saffer).

Regarding Claims 12,18,27 and 28, the combination of Saffer in view of Lin, disclose an apparatus wherein the display area includes at least two areas (Fig.16, Saffer), one area providing an n-dimensional representation of the first hierarchical level of clusters and the other area providing an n-dimensional representation of the other hierarchical level of clusters, where n is an integer (column 21, lines 14-28 and column 22, lines 10-27, Saffer).

Regarding Claim 13, the combination of Saffer in view of Lin, disclose an apparatus comprising

search processor for carrying out a word-related search of the information items (column 18, lines 64-67, Saffer);

the search processor and the graphical user interface being arranged to co-operate so that only those display points corresponding to identified information items are displayed (column 19, lines 4-38, Saffer).

Regarding Claim 15, the combination of Saffer in view of Lin, disclose an apparatus wherein the display processor is operable to generate data representative of the number of information items within the other cluster (column

13, lines 5-14, Saffer), the number of information items being associated with the indication of the relative direction in the n-dimensional space of the other cluster with respect to the first cluster (column 29, lines 21-33, Saffer).

Regarding Claim 17, the combination of Saffer in view of Lin, disclose an apparatus further comprising a user control for selecting information items or clusters of information items within the n-dimensional space using a user controlled pointer (Fig.19; column 21, lines 40-54, Saffer), wherein the number of information items are display with respect to the indication of relative direction, in response to the pointer being positioned over the indication (column 30, lines 50-62, Saffer).

Regarding Claim 26, the combination of Saffer in view of Lin, disclose the method further comprising

displaying a representation of at least some of the positions of the array as an n-dimensional display array of display points within a display area of a graphical display (columns 18-19, lines 64-67 and 1-8, Saffer).

11. Claims 3,6,9,19,20,24, and 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Saffer (US Patent No. 6,990,238) filed September 30, 1999, in view of "A Self-Organizing Semantic Map for Information Retrieval", By: Xia Lin, Dagobert Soergel, and Gary Marchionini, Published 1991; hereinafter referred to

as 'Lin', and further in view of Doerre (US Patent No. 6,446,061) filed June 30, 1999.

Regarding Claims 3 and 24, the combination of Saffer in view of Lin, disclose all of the claimed subject matter, as stated above. However, the combination of Saffer in view of Lin, are silent with respect to providing the first clustering level of information items with a characterizing information feature associated with each of the first level clusters of information items and to provide a characterizing information feature for the clusters of information items within the first level clusters at the other hierarchical level. On the other hand, Doerre discloses providing the first clustering level of information items with a characterizing information feature associated with each of the first level clusters of information items and to provide a characterizing information feature for the clusters of information items within the first level clusters at the other hierarchical level (column 17, lines 24-49, Doerre). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Doerre's teachings into the Saffer and Lin system. A skilled artisan would have been motivated to combine as suggested by Doerre at column 4, lines 22-28, in order to be able to improve the ability and flexibility of the content classifier, so as to cope with the increasing number of documents to be analyzed in a reasonable amount of time.

Regarding Claim 6, the combination of Saffer in view of Lin, and further in view of Doerre, disclose an apparatus wherein the characterizing information item associated with each cluster is the most common word of the textual information associated with each of the information items within each cluster (column 17, lines 14-30, Saffer).

Regarding Claim 9, the combination of Saffer in view of Lin, and further in view of Doerre, disclose an apparatus wherein the information items are pre-processed for mapping (columns 10-11, lines 64-67 and 1-2, respectively, Saffer) by excluding words occurring within the textual information having more than a threshold frequency amongst the set of information items (column 13, lines 43-54, Doerre).

Regarding Claim 19, the combination of Saffer in view of Lin, and further in view of Doerre, disclose a video acquisition and processing apparatus comprising an information retrieval apparatus having a mapping processor operable to receive data representative of a map of information items from a set of information items identified in a search (column 19, lines 4-38, Saffer) using a self organizing map (pg. 262, "Abstract", Lin), the map of information items providing the identified information items with respect to positions in an array in accordance with a mutual similarity of the information items, similar information items mapping to similar positions in the array (Fig.18; column 17, lines 36-57,

Saffer), and to process the map data to form a hierarchical clustering of information items (columns 8-9, lines 53-67 and 1-4, respectively, Saffer) providing a first clustering level of information items and at least one other clustering level of information items for clusters of information items within the first level clusters (column 10, lines 34-40, Saffer),

a display processor operable in combination with a graphical user interface (Fig.18, Saffer) to display a representation of at least some of the positions of the array correspond to identified information items as an n-dimensional display array of display points within a display area of a graphical display (columns 18-19, lines 64-67 and 1-8, Saffer), wherein the display processor is operable to generate data representative of an indication which when displayed on the graphical user interface provides a user, when viewing a first cluster in one of the hierarchical levels of a relative direction within the n-dimensional space of the location of another cluster within the hierarchical level which is not currently displayed within the display area (column 21, lines 55-67 and column 29, lines 21-33, Saffer), and the graphical user interface (Fig.16, Saffer) is operable to display the indication of the relative direction of the other cluster within the display area of the graphical display (column 29, lines 21-33, Saffer), and the data representing the number of information items within the cluster is displayable with respect to the indication (column 13, lines 5-14, Saffer), the information items including video data with the textual information (column 1, lines 44-49, Doerre).

Regarding Claim 20, the combination of Saffer in view of Lin, and further in view of Doerre, disclose the video acquisition and processing apparatus further comprising

a repository containing the information items (column 8, lines 40-48, Doerre), and

a data communications network for connecting the repository with the information retrieval apparatus (column 5, lines 38-46, Saffer).

Regarding Claim 25, the combination of Saffer in view of Lin, and further in view of Doerre, disclose the apparatus wherein the information items include a plurality of characterizing information features, the characterizing information features of each information item being used to form a feature vector for each information item (columns 9-10, lines 62-67 and 1-15, respectively, Saffer), the feature vector being used to form the map data by mapping the information item onto a position within the array (column 19, lines 31-38, Saffer).

12. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saffer (US Patent No. 6,990,238) filed September 30, 1999, in view of "A Self-Organizing Semantic Map for Information Retrieval", By: Xia Lin, Dagobert Soergel, and Gary Marchionini, Published 1991; hereinafter referred to as 'Lin',

further in view of Doerre (US Patent No. 6,446,061) filed June 30, 1999, and further in view of Branscomb (US Patent No. 5,977,992) filed September 5, 1997.

Regarding Claim 21, the combination of Saffer in view of Lin, and further in view of Doerre, disclose all of the claimed subject matter, as stated above. However, Saffer in view of Lin, and further in view of Doerre, are silent with respect the information items include a representative key stamp providing a representative image from the information item. On the other hand, Branscomb discloses the information items include a representative key stamp providing a representative image from the information item (column 5, lines 18-32, Branscomb). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Branscomb's teachings into the Saffer in view of Lin, and in view of Doerre system. A skilled artisan would have been motivated to combine as suggested by Branscomb at column 13, lines 55-63, in order to organize and assemble images in a relational graphic space via a content image, which provides a powerful interactive visual display. As a result, the system is therefore capable of alleviating the amount of time needed as well as decreasing the tediousness of the process.

Regarding Claim 22, the combination of Saffer in view of Lin, further in view of Doerre, and further in view of Branscomb, disclose the video acquisition and processing apparatus wherein the characterizing information feature

associated with each first level cluster and the other characterizing information feature associated with each cluster within the other clustering level of information items are formed from a most common characterizing information feature present in the information items associated with each cluster (column 6, lines 48-52, Doerre) and the common characterizing information feature associated with a cluster includes a representative key stamp, which is common to the cluster (column 13, lines 34-44, Branscomb).

Response to Arguments

Applicant's arguments with respect to newly amended claims 1,19,23, and 33 have been considered but are moot in view of the new ground(s) of rejection.

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Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chelcie Daye whose telephone number is 571-272-3891. The examiner can normally be reached on M-F, 7:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chelcie Daye
Patent Examiner
Technology Center 2100
June 25, 2007


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SUPERVISORY PATENT EXAMINER